THE CHRONICLE
of Higher Education

November 26, 1979 • $1
Volume XIX, Number 13

B32D EIT7IO WSAAO MARBO
ACQUISITIONS EDITOR NF
CONGRESSIONAL INFORMATION SER
7101 WISCONSIN AV/NW
WASHINGTON DC 20014

News Summary

Articles on inside pages

A "university of the air" would be established with $150-million from the founder of *TV Guide*. Story on Page 2.

More than 700 Iranian students in the U. S. face deportation proceedings. Story on Page 3.

Consolidation of federal library programs in the new Department of Education has been proposed by delegates at a White House conference. Story on Page 11.

More money, but less intrusive regulation—that's what a group of public colleges and universities says it wants from state governments. Story on Page 9.

Women's enrollment in graduate programs grew five times as fast as men's during the 1970's, the Census Bureau says. Story on Page 9.

The presidents of the "Seven Sisters" say women's colleges must help students juggle decisions about careers and families. Story on Page 6.

A "marketing approach" to college admissions will require close adherence to high ethical standards, educators say. Story on Page 10.

New educational programs are needed to meet the needs of older Americans, says the former Commissioner on Aging. Story on Page 7.

The Chinese government has begun to demand better performance from both teachers and students. Story on Page 15.

A list of graduate students who have received Fulbright awards for study abroad appears on Page 16.

ALSO IN THIS ISSUE

Books	22
Bulletin Board	29-55
Calendar	27
Deadlines	28
Deaths	26
Fact-File	9
Gazette	26
Grants	26
Ideas	20
International News	15
Letters	23-25
Marginalia	2
News in Brief	2
Notes on Collective Bargaining	2
Opinion	21
Point of View	56
Science	10
Washington News	11-14

Teaching with Games

Give some professors a pair of dice, poker chips, and some old golf tees and they're ready for the classroom

CHRONICLE PHOTOGRAPH BY JOHN C. PHILLIPS

By Robert L. Jacobson

AUSTIN, TEX.

They teach and conduct research, like most of their colleagues, but they like to give their creative output such titles as "Bafá Bafá," METRO-APEX," and "They Shoot Marbles, Don't They?" If their work is not published, it generally makes the rounds anyway through professional meetings and other informal contacts.

They represent many disciplines, including education, sociology, psychology, business administration, mathematics, and the natural sciences. They say they are often misunderstood—even ridiculed—by more traditional scholars, but they don't take it personally. It's not *their* loss, they say.

They collect things, sometimes by the hundreds: golf tees, metal washers, wooden blocks, egg timers, dice, tiny pieces of plastic. If the local hardware store or hobby shop can't supply what they need, they've been known to drive for miles in a snowstorm to find someone who can.

They are the game-players and game-designers of the academic world, and they aren't just playing games. They are in earnest. With great energy and imagination, they are constantly creating, adapting, and refining a wide range of instructional games, simulations, and other "experiential" exercises for all levels of education.

They readily admit that what they do is "fun," but they also do it because they are convinced that some of the most effective learning takes place when students get a chance to act out what they are studying in a game or special environment designed to simulate a part of the real world.

The "gamers" have had a hard time proving that, however. In the nearly two decades since they first became active on the campuses, their work has remained largely on the fringe of recognized academic endeavor. Many faculty members have simply refused to acknowledge that instructional gaming is anything more than a diversion, incompatible with legitimate scholarship.

Still, there are signs today that the field may yet come into its own.

For one thing, it has begun to expand beyond an initial emphasis on elementary and secondary education to include more and more activities aimed at higher education.

Even more important, potentially, is the advent of the micro-processor—a technological breakthrough that is putting sophisticated portable computers within the financial reach of all but the most impoverished academic departments. At a cost of less than $1,000, even individual faculty members can now think of acquiring their own micro-computers.

> "Many academic gamers think that nothing short of an educational revolution could be in the making."

Those devices, which have a surprising capacity for handling the large data requirements of many gaming models, have experienced a marked increase in sales in recent months. Major national companies are entering the market, pushing the products for home and school.

Indeed, many academic gamers think that nothing short of an educational revolution could be in the making. A lot will depend, they say, on whether funds are made available to take advantage of what the small computers can do. "The hardware is all there," says one specialist, "but the software tends to be trivial."

Computers are only one aspect of educational gaming. More common are a host of non-computer board games and role-playing exercises that have worked their way into portions of the curriculum at hundreds of colleges and universities.

The phenomenon has occurred almost casually, gaming enthusiasts say, as first one professor and then another has sought to spice up a course and provoke student interest by using a game. Many such faculty members apparently aren't even aware that others are doing the same thing.

But a sizable body of literature underscores the field's popularity. A 10-year bibliography recently published by the ERIC Clearinghouse on Teacher Education, for example, contains some 1,600 entries on games and simulations in 70 categories.

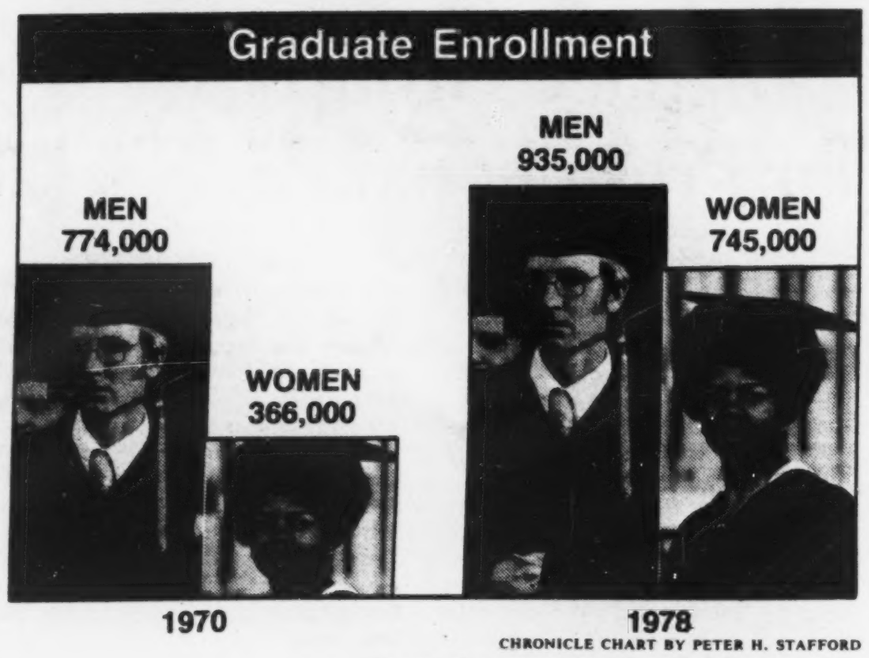
A dozen university-based centers and projects provide game evaluations and other activities "beyond the development of materials," according to a newly revised handbook published by the University of Alabama's Institute of Higher Education Research and Services.

At a few institutions, notably the University of Michigan and the University of Southern California, game development has become a major enterprise. Some games are so complex that they take up to several years to design and can engage dozens of players over many hours or even days.

Whether games and simulations actually lead to better acquisition of cognitive skills than do lectures and other traditional forms of instruction has not been demonstrated conclusively. Even on the "affective" or emotional side of learning, where

Continued on Page 19, Column 1

Graduate Study Is Attracting More Women



CHRONICLE CHART BY PETER H. STAFFORD

Data from a Census Bureau survey show women's gains in graduate enrollment.

WASHINGTON

A dramatic change in graduate-school enrollment has been underscored by the results of a U. S. Census Bureau survey.

The number of women enrolled in graduate programs has grown five times as fast as the number of male graduate students, the survey found.

As a result, for every 100 men in graduate school last year, 80 women were enrolled. As recently as 1970, there were only 47 women per 100 men in graduate schools.

Between 1970 and 1978, the census data show, the number of women in graduate schools rose 104 per cent, to a total of 745,000, while the number of men in graduate programs rose 21 per cent, to a total of 935,000.

The average age of graduate students also increased markedly.

In 1970, the Census Bureau notes, about half of all graduate students were under 25 years old. By 1978, only about 37 per cent were under 25.

Persons 30 to 34 years old accounted for 23 per cent of all graduate students in 1978, up from 15 per cent in 1970.

The percentage of female graduate students who were enrolled on a full-time basis rose from 34 per cent in 1970 to 45 per cent in 1978. The percentage of male graduate students enrolled full-time remained at about 53 per cent over eight years.

The increasing number of older students has not been limited to the graduate schools.

For all levels of higher education combined, the number of male students 25 to 34 years old increased 48 per cent between 1970 and 1978, according to the Census Bureau's survey. That compares with an increase of only 9 per cent for men 18 to 24. In the same period, the number of female students 25 to 34 years old increased by 187 per cent, while those 18 to 24 increased by about 36 per cent.

Two-year colleges have shared in the trend toward older students.

The number of women over age 25 enrolled in two-year colleges nearly tripled between 1970 and 1978. The number of men over age 25 in two-year colleges doubled.

The percentage of married students declined from 40 per cent in 1970 to 30 per cent in 1978. During this period, the proportion of married non-students in the same age-group also declined, the Census Bureau says.

Among college students 18 to 24 years old, those who were married declined from 13.3 per cent in 1970 to 8.9 per cent in 1978. —J.M.

FACT–FILE

College Enrollment Rates

	1970			1978		
	Total number	Number enrolled	Enrollment rate	Total number	Number enrolled	Enrollment rate
Men						
18 and 19 years old	3,349,000	1,346,000	40.2%	3,975,000	1,391,000	35.0%
20 and 21 years old	2,651,000	1,083,000	40.9%	3,911,000	1,202,000	30.7%
22 to 24 years old	4,385,000	902,000	20.6%	5,499,000	1,028,000	18.7%
25 to 29 years old	6,467,000	684,000	10.6%	8,539,000	922,000	10.8%
30 to 34 years old	5,373,000	256,000	4.8%	7,624,000	474,000	6.2%
Total, 18 to 34 years old	**22,225,000**	**4,271,000**	**19.2%**	**29,548,000**	**5,017,000**	**17.0%**
Women						
18 and 19 years old	3,609,000	1,248,000	34.6%	4,178,000	1,507,000	36.1%
20 and 21 years old	3,467,000	774,000	22.3%	4,181,000	1,096,000	26.2%
22 to 24 years old	5,091,000	452,000	8.9%	5,903,000	770,000	13.0%
25 to 29 years old	6,948,000	255,000	3.7%	9,050,000	697,000	7.7%
30 to 34 years old	5,815,000	154,000	2.6%	8,067,000	476,000	5.9%
Total, 18 to 34 years old	**24,930,000**	**2,883,000**	**11.6%**	**31,379,000**	**4,546,000**	**14.5%**
High-school graduates 18 and 19 years old						
Men	2,337,000	1,346,000	57.6%	2,772,000	1,391,000	50.2%
Women	2,767,000	1,248,000	45.1%	3,218,000	1,507,000	46.8%

Level of Enrollment

	1st year	2nd year	3rd year	4th year	5th year	6th year or higher
Men						
16 years old	4,000	—	—	—	—	—
17 years old	102,000	—	1,000	—	—	—
18 years old	614,000	51,000	1,000	1,000	—	—
19 years old	202,000	457,000	64,000	1,000	—	—
20 years old	86,000	159,000	331,000	51,000	3,000	—
21 years old	52,000	84,000	150,000	270,000	17,000	—
22 years old	52,000	62,000	81,000	153,000	75,000	20,000
23 years old	38,000	52,000	42,000	55,000	56,000	62,000
24 years old	25,000	52,000	39,000	57,000	44,000	63,000
25 to 29 years old	114,000	165,000	137,000	116,000	134,000	256,000
30 to 34 years old	46,000	92,000	62,000	69,000	60,000	146,000
Total, 16 through 34 years old	**1,333,000**	**1,173,000**	**907,000**	**775,000**	**389,000**	**546,000**
Women						
16 years old	11,000	4,000	—	—	—	—
17 years old	139,000	10,000	3,000	—	—	—
18 years old	680,000	97,000	2,000	—	—	—
19 years old	162,000	493,000	67,000	6,000	—	—
20 years old	68,000	143,000	313,000	79,000	2,000	—
21 years old	32,000	53,000	112,000	264,000	25,000	4,000
22 years old	56,000	54,000	64,000	94,000	51,000	16,000
23 years old	23,000	36,000	31,000	43,000	52,000	38,000
24 years old	32,000	33,000	23,000	34,000	41,000	47,000
25 to 29 years old	116,000	117,000	79,000	92,000	136,000	157,000
30 to 34 years old	113,000	73,000	57,000	58,000	76,000	99,000
Total, 16 through 34 years old	**1,434,000**	**1,113,000**	**751,000**	**670,000**	**383,000**	**362,000**

SOURCE: BUREAU OF THE CENSUS, CURRENT POPULATION REPORTS, SERIES P-20, NO. 346

State Colleges Appeal for More Financial Support, Less Outside Regulation

SAN ANTONIO, TEX.

The American Association of State Colleges and Universities has called on state governments to bolster their financial support of public higher education but to pull back from a growing tendency to regulate campus affairs.

In a policy statement adopted in principle at its annual meeting here, the association declared that funds to insure the quality of public colleges should be the states' "first priority."

It warned, however, that increasing "oversight" by legislators and other state officials was eroding the institutions' authority to make their own decisions about fundamental academic concerns—including faculty appointments, the curriculum, research, and publications.

Ironically, the statement marked the first time since the association's founding in 1961 that it had addressed state-level education issues in a separate document of this kind, although it has often issued statements on matters of federal policy.

Importance of States

Association sources said the new statement reflected a realization that more and more major government decisions affecting higher education were being made in the state capitals, rather than in Washington.

There was special concern here that a previously overlooked sentence in the comprehensive higher-education bill, HR 5192, passed by the House of Representatives earlier this month, would encourage statewide planning agencies to expand their authority over colleges and universities.

The sentence, part of a new section on "education outreach programs," would authorize federal grants to states for planning improved access to postsecondary education, for coordinating occupational information services, and for "promoting more effective and efficient use of available resources for continuing education."

Concern over Interpretation

John P. Mallan, assistant executive director of the state-college association, said many higher-education leaders feared that the sentence could be interpreted broadly as a "mandate to do a whole lot more—a license for the states to greatly increase" their influence over individual institutions.

That may not have been the provision's original intent, several sources here suggested, but the interpretation might go further than many campus officials are willing to accept.

In Washington, officials of several associations said they were trying to work out new wording for the provision, which would guarantee that institutions of higher education would be fairly represented in any statewide planning efforts.

The association's policy statement also dealt with increasing competition between public and private colleges for state support. It endorsed "the American concept of pluralism in higher education" but drew the line at state efforts to aid private institutions "at the expense of public-college students."

More than 40 states already provide some form of assistance to private higher education, the association noted. It suggested, however, that such support threatened to cut into appropriations for public colleges and lead to an increase in tuition and other student charges.

The statement came less than a month after the Sloan Commission on Government and Higher Education proposed that state agencies arrange for periodic reviews of the quality of all public colleges and universities, while encouraging—but not requiring—private colleges to undergo the same scrutiny.

The Sloan proposal drew sharp criticism from public-college leaders.

'Restrained' Increases

Meanwhile, a newly reported survey of the association's 333 member colleges and universities found that state legislatures, "on the whole," had restrained increases in tuition and fees at those institutions over the past year. Undergraduate charges for state residents rose only 6.6 per cent from September, 1978, to September, 1979, the survey found, compared with a 12.4-per-cent hike in the Consumer Price Index.

Room-and-board rates, however, increased 10.4 per cent in the same period, causing an overall rise of 9.2 per cent, to an average of $2,097, in charges paid by in-state students. The combined increase for out-of-state undergraduates was 8.2 per cent, for average charges of $3,121 per student.

At the graduate level, tuition and fees rose 8.2 per cent, to an average of $2,177, for state residents and 8.3 per cent, to an average of $3,113, for non-residents.

The association said the relatively small hike in tuition rates, along with new federal assistance for middle-income students, may have contributed to an unexpected 2-per-cent increase in state-college head-count enrollments this year.

—ROBERT L. JACOBSON

U.S. Charges 2 Universities with Sex Bias

WASHINGTON

The Justice Department has moved against two institutions, Texas A&M University and the University of Alaska, charging them with practicing sex bias against female students.

In the Texas case, the department asked the U. S. District Court in Houston to allow it to intervene in support of a suit challenging Texas A&M's policy of excluding women from its marching band and other groups.

In the second action, the department sought to join a lawsuit filed in U. S. District Court in Anchorage by members of last year's women's basketball team at the University of Alaska. They charged the institution with failing to provide comparable support for the men's and women's squads.

The actions were the first the department has taken under Title IX of the Education Amendments of 1972, Justice Department officials said. Title IX prohibits sex bias in federally financed education programs.

The Texas suit was originally filed by Melanie Zentgraf, who charged the university with barring women from the famous Aggie band and three other performing groups.

In the Alaska case, the Justice Department alleged that the institution had discriminated against the women's team in budget, publicity, travel allowances, coaching, and uniforms.

C 2175 - 21

THE CHRONICLE of Higher Education

December 3, 1979 • $1
Volume XIX, Number 14

8320 EITTIO WSAAO MARBO
ACQUISITIONS EDITOR NF
CONGRESSIONAL INFORMATION SER
7101 WISCONSIN AV/NW
WASHINGTON DC 20014

News Summary

Articles on inside pages

The Supreme Court has refused to review three lower-court decisions that limit the application of a law barring sex bias at educational institutions. Story on Page 15.

President Carter's nominee to head the new Department of Education used her confirmation hearing to try to allay fears about the new agency. Story on Page 15.

Immigration officials say that more than 3,000 Iranian students are subject to deportation. Other students are having money problems. Story on Page 2.

The tight job market has led some institutions—and some couples—to try job-sharing. Story on Page 3.

The Department of Energy has been criticized for interfering in the internal affairs of some universities where it supports research. Story on Page 4.

Black land-grant institutions say they want a fairer share of agricultural research grants. Story on Page 5.

An exemption in a mandatory retirement law for tenured college and university employees has been clarified. Story on Page 19.

Patent protection for inventions developed in the course of federally financed research would be granted to institutions under a Senate bill. Story on Page 21.

Wholesale cutbacks in faculties and courses may face Ontario's universities if the province doesn't provide more financial support, says a new report. Story on Page 9.

South Korea has reopened its colleges and universities following their month-long closure after the assassination of President Park Chung Hee. Story on Page 9.

ALSO IN THIS ISSUE

Books	24
Bulletin Board	31-55
Calendar	28-29
Deadlines	29
Deaths	30
Fact-File	21
Gazette	30
Grants	29
Ideas	22
International News	9
Letters	25-27
Marginalia	2
News in Brief	2
Point of View	56
Science	23
Washington News	15-21

CABLE TV: REVOLUTION COMING IN COLLEGE SPORTS?

CHRONICLE PHOTOGRAPH BY JOHN C. PHILLIPS

Cable television is assuming a growing role in college sports. Above, an ABC cameraman films action during last month's Ohio State–Michigan game. See story on Page 6.

U.S. Reverses Decade-Long Decline in Support for Science, NSF Reports

By Anne C. Roark

WASHINGTON

After a decade of erosion, the U. S. commitment to science and technology is building up at an "encouraging rate," according to the National Science Board, the governing body of the National Science Foundation.

Not only is support for science by government and industry growing; the quality of scientific research is improving, the board says.

With the supply of trained researchers now keeping pace with demand, only two major trends continue to disturb government analysts, the board says:

▶ Women and blacks continue to be underrepresented in scientific careers—a situation that has been improved only partially by government affirmative-action programs.

▶ Fewer positions are opening up for young, untenured scholars—a trend that some experts fear will dampen the vitality of scientific research in coming decades.

Whatever the future holds for science and technology, the U. S. record in the past few years has been a reasonably encouraging one, the science board concludes.

The study, *Science Indicators: 1978*, is the board's fourth annual report to the President on the state of science and technology in the U. S.

In recent years, the study found, the U. S. has spent more on research and development than have the United Kingdom, France, West Germany, and Japan combined. While many science policymakers have been concerned that U. S. research expenditures are falling in relation to the nation's total economic output, the board now reports the decline is ending.

Moreover, the board says, decreases similar to the ones the U. S. experienced are now occurring in most other highly

Continued on Page 20, Column 1

Boost Aid, Improve Programs for Youths Not in College, Carnegie Panel Urges

By Catherine Myers

American society must try to rectify the "serious inequities" between the resources allocated to college students and the "much less adequate resources" available to other young people, the Carnegie Council on Policy Studies in Higher Education said last week.

The council called for major revisions in high-school and college programs that would aid disadvantaged young people who are unemployed or have withdrawn from society. Excerpts from the council's report begin on Page 10.

The council estimated that about 100,000 more young people could enter college each year "if the percentage of 'most able' entrants from low-income and moderate-income families came up to that of the most affluent one-fourth of families."

"Those who are concerned with the future of higher education must also give

Continued on Page 10, Column 1

NOTE

ONLY THE FOLLOWING PAGES OF THIS PUBLICATION

HAVE BEEN FILMED

p. 1, 21